



Morenci Inc. 4521 State Hwy. 666, Morenci, Arizona 85540-9795 • (602) 865-4521

Rec'd 3/17/93
from PD

SFUND RECORDS CTR
2349215

January 18, 1993

Arizona Department of Environmental Quality
Office of Water Quality
Water Pollution Compliance Unit
3033 North Central Ave. (at Earll)
Phoenix, Arizona 85012

Dear Sirs:

Re: Groundwater Quality Protection Permit No. G-0001-06
Fourth Quarter 1992 Sampling Report


This constitutes the quarterly groundwater sampling report required by Groundwater Quality Protection Permit No. G-0001-06, as specified on page 11 of that permit. Included are Self-Monitoring Report forms, Groundwater Sampling Procedures Documentation forms and tables containing monthly sampling results, quarterly sampling results, and 5-point averages.

Monthly-required constituent analyses for October, November and December 1992 are found in Tables 1A, 1B, and 1C. Quarterly required constituent analyses for October 1992 are found in Tables 2A, 2B, and 2C.

Permit G-0001-06 specifies that compliance shall be based on 5-point running averages. Accordingly, we have enclosed 5-point monthly running averages for June 1992 through October 1992, July 1992 through November 1992, and August 1992 through December 1992. These are found in Tables 3A, 3B, and 3C. Five-point quarterly-required running averages are provided for October 1991 through October 1992. These are found in Tables 4A, 4B, and 4C. For purposes of computing averages when values were not detectable, one-half the EPA method detection limit was used for the constituent concentration. This substitution was discussed in Supplement 4 to our application for the permit.

Weekly monitoring for fluids in the leak detection system installed in the Central SX/EW raffinate and plant feed ponds continues. Please contact me if you have any questions.

Very truly yours,


T. L. Cogut
Environmental Services
Supervisor

TLC:km (F7)

Enclosures

cc: J. D. Worsham - w/encls.
T. R. Snider - w/o encls.
A. J. Broderick - "

1/20
KM

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00085 Name : Well CC-7
 Latitude: 33°3'25.09" Longitude: 109°18'52.61"
 Township: 04S Range : 29E
 Section : 25 Quarter : BDD

Invnum: 100193
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.
 Timothy R. Snider, **Branch Manager**
 P. O. Box 187
 Morenci, AZ. 85540

Quarterly Reporting - Monthly Monitoring

PH						PERMIT LIMIT		PERMIT LIMIT	
						Reserved SU		No Limit	
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED			LOADING REPORTED	
10/06/92	10/20/92	00400	EPA	150.1	1186	7.0000	SU	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00400	EPA	150.1	1186	7.0000	SU	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00400	EPA	150.1	1186	7.1000	SU	XXXXXXXXXXXXXXXXXX	
BICARBONATE						PERMIT LIMIT		PERMIT LIMIT	
						Reserved MG/L		No Limit	
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED			LOADING REPORTED	
10/06/92	10/20/92	00440	EPA	305.1	1186	122.0000	MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00440	EPA	305.1	1186	117.0000	MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00440	EPA	305.1	1186	121.0000	MG/L	XXXXXXXXXXXXXXXXXX	
TOTAL CALCIUM						PERMIT LIMIT		PERMIT LIMIT	
						Reserved MG/L		No Limit	
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED			LOADING REPORTED	
10/06/92	10/20/92	00916	EPA	215.1	1186	410.0000	MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00916	EPA	215.1	1186	361.0000	MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00916	EPA	215.1	1186	378.0000	MG/L	XXXXXXXXXXXXXXXXXX	

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
 Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00085 Name : Well CC-7

Invnum: 100193
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
TOTAL MAGNESIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00927	EPA	242.1	1186	66.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00927	EPA	242.1	1186	65.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00927	EPA	242.1	1186	69.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
SODIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00929	EPA	273.1	1186	32.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00929	EPA	273.1	1186	34.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00929	EPA	273.1	1186	31.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL POTASSIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00937	EPA	258.1	1186	10.1000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00937	EPA	258.1	1186	10.5000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00937	EPA	258.1	1186	10.7000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL CHLORIDE						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00941	EPA	325.1	1186	153.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00941	EPA	325.1	1186	146.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00941	EPA	325.1	1186	148.0000 MG/L	XXXXXXXXXXXXXXXXXX

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Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
Point : A00085 Name : Well CC-7

Invnum: 100193
Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SULFATE							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00945	EPA 375.3	1186	975.0000 MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00945	EPA 375.3	1186	930.0000 MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00945	EPA 375.3	1186	925.0000 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
TOTAL IRON							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01045	EPA 236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	01045	EPA 236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	01045	EPA 236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
TOTAL DISSOLVED SOLIDS							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	70295	EPA 160.1	1186	1870.0000 MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	70295	EPA 160.1	1186	1740.0000 MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	70295	EPA 160.1	1186	1790.0000 MG/L	XXXXXXXXXXXXXXXXXX	

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

James A. Smith

DATE

1/14/92

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00085 Name : Well CC-7
 Latitude: 33°3'25.09" Longitude: 109°18'52.61"
 Township: 04S Range : 29E
 Section : 25 Quarter : BDD

Invnum: 100193
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.
 Timothy R. Snider, Branch Manager
 P. O. Box 187
 Morenci, AZ. 85540

Quarterly Reporting - Quarterly Monitoring

						PERMIT LIMIT	PERMIT LIMIT
TOTAL FLUORIDE						1.4000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00951	EPA	340.1	1186	0.5200 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL ARSENIC						0.5000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01002	EPA	206.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL BARIUM						1.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01007	EPA	208.1	1186	-0.1000 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL CADMIUM						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01027	EPA	213.1	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL CHROMIUM						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01029	EPA	218.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
 Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00085 Name : Well CC-7

Invnum: 100193
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
TOTAL COPPER						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01042	EPA	220.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL LEAD						0.0500 MG/L ³	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01051	EPA	239.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL MANGANESE						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01055	EPA	243.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL SILVER						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01077	EPA	272.1	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL SELENIUM						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01147	EPA	270.2	1186	0.0050 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL PHENOLS						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	46000	EPA	420.2	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL MERCURY						0.0020 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	71900	EPA	245.1	1186	0.0010 MG/L	XXXXXXXXXXXXXXXXXX

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Point : A00085 Name : Well CC-7

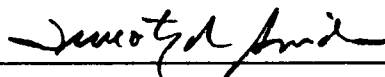
Invnum: 100193
Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
TOTAL ZINC						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	82062	EPA	289.1	1186	0.0300 MG/L	XXXXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
NITRATE						10.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00620	EPA	353.2	1186	1.6000 MG/L	XXXXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT



DATE

1/19/93

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
Point : A00085 Name : Well CC-7


Invnum: 100193
Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
TOTAL ZINC						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	82062	EPA 289.1	1186	0.0300 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
NITRATE						10.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00620	EPA 353.2	1186	1.6000 MG/L	XXXXXXXXXXXXXXXXXX	

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT



DATE

11/19/93

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00086 Name : Well CC-8
 Latitude: 33°3'42.10" Longitude: 109°19'19.16"
 Township: 04S Range : 29E
 Section : 25 Quarter : BBB

Invnum: 100193
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.
 Timothy R. Snider, **Branch Manager**
 P. O. Box 187
 Morenci, AZ. 85540

Quarterly Reporting - Monthly Monitoring

						PERMIT LIMIT	PERMIT LIMIT
PH						Reserved SU	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00400	EPA	150.1	1186	7.3000 SU	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00400	EPA	150.1	1186	7.3000 SU	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00400	EPA	150.1	1186	7.4000 SU	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
BICARBONATE						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00440	EPA	305.1	1186	108.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00440	EPA	305.1	1186	108.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00440	EPA	305.1	1186	96.5000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL CALCIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00916	EPA	215.1	1186	280.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00916	EPA	215.1	1186	249.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00916	EPA	215.1	1186	250.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
Point : A00086 Name : Well CC-8

Invnum: 100193
Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
TOTAL MAGNESIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00927	EPA 242.1	1186	61.0000 MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00927	EPA 242.1	1186	62.0000 MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00927	EPA 242.1	1186	62.0000 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
SODIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00929	EPA 273.1	1186	77.0000 MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00929	EPA 273.1	1186	87.0000 MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00929	EPA 273.1	1186	79.0000 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
TOTAL POTASSIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00937	EPA 258.1	1186	8.5000 MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00937	EPA 258.1	1186	9.1000 MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00937	EPA 258.1	1186	8.8000 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
TOTAL CHLORIDE						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00941	EPA 325.1	1186	296.0000 MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00941	EPA 325.1	1186	308.0000 MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00941	EPA 325.1	1186	325.0000 MG/L	XXXXXXXXXXXXXXXXXX	

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 Quarterly Reporting - Monthly Monitoring

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 Point : A00086 Name : Well CC-8

Invnum: 100193
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00945	EPA	375.3	1186	560.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00945	EPA	375.3	1186	510.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00945	EPA	375.3	1186	485.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	70295	EPA	160.1	1186	1510.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	70295	EPA	160.1	1186	1370.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	70295	EPA	160.1	1186	1380.0000 MG/L	XXXXXXXXXXXXXXXXXX

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Demetrius A. Smith

DATE

1/19/93

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00086 Name : Well CC-8
 Latitude: 33°3'42.10" Longitude: 109°19'19.16"
 Township: 04S Range : 29E
 Section : 25 Quarter : BBB

Invnum: 100193
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.
 Timothy R. Snider, Branch Manager
 P. O. Box 187
 Morenci, AZ. 85540

Quarterly Reporting - Quarterly Monitoring

						PERMIT LIMIT	PERMIT LIMIT
TOTAL FLUORIDE						1.4000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00951	EPA	340.1	1186	0.5600 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL ARSENIC						0.5000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01002	EPA	206.2	1186	0.0030 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL BARIUM						1.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01007	EPA	208.1	1186	-0.1000 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL CADMIUM						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01027	EPA	213.1	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL CHROMIUM						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01029	EPA	218.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
Point : A00086 Name : Well CC-8

Invnum: 100193
Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
TOTAL COPPER						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01042	EPA 220.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX	
TOTAL LEAD						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01051	EPA 239.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
TOTAL MANGANESE						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01055	EPA 243.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX	
TOTAL SILVER						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01077	EPA 272.1	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
TOTAL SELENIUM						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01147	EPA 270.2	1186	0.0030 MG/L	XXXXXXXXXXXXXXXXXX	
TOTAL PHENOLS						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	46000	EPA 420.2	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX	
TOTAL MERCURY						0.0020 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	71900	EPA 245.1	1186	0.0011 MG/L	XXXXXXXXXXXXXXXXXX	

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
Point : A00086 Name : Well CC-8

Invnum: 100193
Permit: G-0001-06

TOTAL ZINC

SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID
10/06/92	10/20/92	82062	EPA	289.1 1186

PERMIT LIMIT
Reserved MG/L
CONCENTRATION REPORTED
0.0060 MG/L

PERMIT LIMIT
No Limit
LOADING REPORTED
XXXXXXXXXXXXXXXXXX

NITRATE

SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID
10/06/92	10/20/92	00620	EPA	353.2 1186

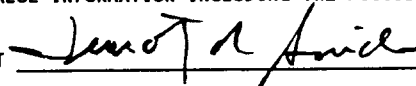
PERMIT LIMIT
10.0000 MG/L
CONCENTRATION REPORTED
1.3000 MG/L

PERMIT LIMIT
No Limit
LOADING REPORTED
XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT



DATE

1/19/93

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00087 Name : Well CC-14
 Latitude: 33°3'32.54" Longitude: 109°19'13.72"
 Township: 04S Range : 29E
 Section : 25 Quarter : BCA

Invnum: 100193
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.
 Timothy R. Snider, **Branch Manager**
 P. O. Box 187
 Morenci, AZ. 85540

Quarterly Reporting - Monthly Monitoring

						PERMIT LIMIT		PERMIT LIMIT	
PH						Reserved SU		No Limit	
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID		CONCENTRATION REPORTED		LOADING REPORTED	
10/06/92	10/20/92	00400	EPA	150.1	1186	7.1000	SU	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00400	EPA	150.1	1186	7.2000	SU	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00400	EPA	150.1	1186	7.4000	SU	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT		PERMIT LIMIT	
BICARBONATE						Reserved MG/L		No Limit	
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID		CONCENTRATION REPORTED		LOADING REPORTED	
10/06/92	10/20/92	00440	EPA	305.1	1186	108.0000	MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00440	EPA	305.1	1186	106.0000	MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00440	EPA	305.1	1186	102.0000	MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT		PERMIT LIMIT	
TOTAL CALCIUM						Reserved MG/L		No Limit	
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID		CONCENTRATION REPORTED		LOADING REPORTED	
10/06/92	10/20/92	00916	EPA	215.1	1186	310.0000	MG/L	XXXXXXXXXXXXXXXXXX	
11/02/92	11/20/92	00916	EPA	215.1	1186	280.0000	MG/L	XXXXXXXXXXXXXXXXXX	
12/01/92	12/14/92	00916	EPA	215.1	1186	285.0000	MG/L	XXXXXXXXXXXXXXXXXX	

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
 Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00087 Name : Well CC-14

Invnum: 100193
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
TOTAL MAGNESIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00927	EPA	242.1	1186	62.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00927	EPA	242.1	1186	64.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00927	EPA	242.1	1186	64.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
SODIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00929	EPA	273.1	1186	47.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00929	EPA	273.1	1186	53.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00929	EPA	273.1	1186	47.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL POTASSIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00937	EPA	258.1	1186	9.8000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00937	EPA	258.1	1186	10.5000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00937	EPA	258.1	1186	10.4000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL CHLORIDE						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00941	EPA	325.1	1186	293.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00941	EPA	325.1	1186	280.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00941	EPA	325.1	1186	286.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
Point : A00087 Name : Well CC-14

Invnum: 100193
Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
SULFATE						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00945	EPA	375.3	1186	585.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00945	EPA	375.3	1186	585.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	00945	EPA	375.3	1186	560.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL IRON						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL DISSOLVED SOLIDS						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	70295	EPA	160.1	1186	1560.0000 MG/L	XXXXXXXXXXXXXXXXXX
11/02/92	11/20/92	70295	EPA	160.1	1186	1400.0000 MG/L	XXXXXXXXXXXXXXXXXX
12/01/92	12/14/92	70295	EPA	160.1	1186	1470.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

James A. Smith

DATE

1/19/93

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00087 Name : Well CC-14
 Latitude: 33°3'32.54" Longitude: 109°19'13.72"
 Township: 04S Range : 29E
 Section : 25 Quarter : BCA

Invnum: 100193
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.
 Timothy R. Snider, **Branch Manager**
 P. O. Box 187
 Morenci, AZ. 85540

Quarterly Reporting - Quarterly Monitoring

TOTAL FLUORIDE						PERMIT LIMIT	PERMIT LIMIT
						1.4000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	00951	EPA	340.1	1186	0.7600 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL ARSENIC						PERMIT LIMIT	PERMIT LIMIT
						0.5000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01002	EPA	206.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL BARIUM						PERMIT LIMIT	PERMIT LIMIT
						1.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01007	EPA	208.1	1186	-0.1000 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL CADMIUM						PERMIT LIMIT	PERMIT LIMIT
						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01027	EPA	213.1	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX
TOTAL CHROMIUM						PERMIT LIMIT	PERMIT LIMIT
						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01029	EPA	218.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
 Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00087 Name : Well CC-14

Invnum: 100193
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
TOTAL COPPER						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01042	EPA 220.1	1186	0.0200 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
						0.0500 MG/L	No Limit
TOTAL LEAD						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01051	EPA 239.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
						0.0500 MG/L	No Limit
TOTAL MANGANESE						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01055	EPA 243.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
						0.0500 MG/L	No Limit
TOTAL SILVER						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01077	EPA 272.1	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
						0.0500 MG/L	No Limit
TOTAL SELENIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	01147	EPA 270.2	1186	0.0030 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
						0.0100 MG/L	No Limit
TOTAL PHENOLS						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	46000	EPA 420.2	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
						0.0020 MG/L	No Limit
TOTAL MERCURY						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
10/06/92	10/20/92	71900	EPA 245.1	1186	0.0005 MG/L	XXXXXXXXXXXXXXXXXX	

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
Point : A00087 Name : Well CC-14

Invnum: 100193
Permit: G-0001-06

TOTAL ZINC						PERMIT LIMIT	PERMIT LIMIT
SAMPLE DATE						Reserved MG/L	No Limit
ANALYSIS DATE						CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	82062	EPA	289.1	1186	0.0400 MG/L	XXXXXXXXXXXXXXXXXX
NITRATE						PERMIT LIMIT	PERMIT LIMIT
SAMPLE DATE						10.0000 MG/L	No Limit
ANALYSIS DATE						CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	00620	EPA	353.2	1186	1.2000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

James A. Smith

DATE

1/19/93

TABLE 1A

CHASE CREEK MONITOR WELL
Monthly Analytical Results (mg/l)

Well No. CC-7

<u>Element</u>	<u>10-06-92</u>	<u>11-02-92</u>	<u>12-01-92</u>
Calcium	410.00	361.00	378.00
Chloride	153.00	146.00	148.00
Iron	0.015	0.015	0.015
Magnesium	66.00	65.00	69.00
pH	7.00	7.00	7.10
Sodium	32.00	34.00	31.00
Sulfate	975.0	930.0	925.0
TDS	1870	1740	1790
Potassium	10.10	10.50	10.70
Bicarbonate	122.00	117.00	121.00

TABLE 1B

CHASE CREEK MONITOR WELL
Monthly Analytical Results (mg/l)

Well No. CC-8

<u>Element</u>	<u>10-06-92</u>	<u>11-02-92</u>	<u>12-01-92</u>
Calcium	280.00	249.00	250.00
Chloride	296.00	308.00	325.00
Iron	0.015	0.015	0.015
Magnesium	61.00	62.00	62.00
pH	7.30	7.30	7.40
Sodium	77.00	87.00	79.00
Sulfate	560.0	510.0	485.0
TDS	1510	1370	1380
Potassium	8.50	9.10	8.80
Bicarbonate	108.00	108.00	96.50

TABLE 1C

CHASE CREEK MONITOR WELL
Monthly Analytical Results (mg/l)

Well No. CC-14

<u>Element</u>	<u>10-06-92</u>	<u>11-02-92</u>	<u>12-01-92</u>
Calcium	310.00	280.00	285.00
Chloride	293.00	280.00	286.00
Iron	0.015	0.015	0.015
Magnesium	62.00	64.00	64.00
pH	7.10	7.20	7.40
Sodium	47.00	53.00	47.00
Sulfate	585.0	585.0	560.0
TDS	1560	1400	1470
Potassium	9.80	10.50	10.40
Bicarbonate	108.00	106.00	102.00

TABLE 2A

CHASE CREEK MONITOR WELL
Quarterly Analytical Results (mg/l)

Well No. CC-7

<u>Element</u>	<u>10-06-92</u>
Arsenic	.0005
Barium	0.050
Cadmium	.0025
Chromium	.025
Lead	.0005
Mercury	.0010
Nitrate (N)	1.60
Selenium	.005
Silver	.0050
Fluoride	00.52
Phenols	.0010
Copper	00.01
Manganese	0.005
Zinc	00.0300

TABLE 2B

CHASE CREEK MONITOR WELL
Quarterly Analytical Results (mg/l)

Well No. CC-8

<u>Element</u>	<u>10-06-92</u>
Arsenic	.0030
Barium	0.050
Cadmium	.0025
Chromium	.025
Lead	.0005
Mercury	.0011
Nitrate (N)	1.30
Selenium	.003
Silver	.0050
Fluoride	00.56
Phenols	.0010
Copper	00.01
Manganese	0.005
Zinc	00.0060

TABLE 2C

CHASE CREEK MONITOR WELL
Quarterly Analytical Results (mg/l)

Well No. CC-14

<u>Element</u>	<u>10-06-92</u>
Arsenic	.0005
Barium	0.050
Cadmium	.0025
Chromium	.025
Lead	.0005
Mercury	.0005
Nitrate (N)	1.20
Selenium	.003
Silver	.0050
Fluoride	00.76
Phenols	.0010
Copper	00.02
Manganese	0.005
Zinc	00.0400

TABLE 3A

CHASE CREEK MONITOR WELL
Five Point Monthly Average (mg/l)

Element	J, J, A, S, O, 92	Well No. CC-7	A, S, O, N, D, 92
		J, A, S, O, N, 92	
Calcium	398.00	390.20	383.80
Chloride	157.40	154.20	152.00
Iron	.015	.015	.015
Magnesium	69.600	67.800	67.600
pH	7.22	7.20	7.22
Sodium	33.000	33.000	32.600
Sulfate	993.0	969.0	952.0
TDS	1891	1860	1836
Potassium	10.58	10.48	10.56
Bicarbonate	119.60	118.60	119.60

TABLE 3B

CHASE CREEK MONITOR WELL
Five Point Monthly Average (mg/l)

Element	<u>J, J, A, S, O, 92</u>	Well No. CC-8	
		<u>J, A, S, O, N, 92</u>	<u>A, S, O, N, D, 92</u>
Calcium	290.00	277.80	269.80
Chloride	292.40	299.00	306.40
Iron	.015	.015	.015
Magnesium	65.400	63.200	62.200
pH	7.46	7.44	7.46
Sodium	75.800	78.600	79.600
Sulfate	609.0	571.0	545.0
TDS	1527	1484	1452
Potassium	8.78	8.80	8.86
Bicarbonate	110.20	109.20	106.50

TABLE 3C

CHASE CREEK MONITOR WELL
Five Point Monthly Average (mg/l)

<u>Element</u>	<u>J, J, A, S, O, 92</u>	<u>Well No. CC-14</u>	
		<u>J, A, S, O, N, 92</u>	<u>A, S, O, N, D, 92</u>
Calcium	307.20	301.20	294.20
Chloride	297.80	292.20	290.00
Iron	.015	.015	.015
Magnesium	65.400	64.200	64.000
pH	7.28	7.28	7.34
Sodium	46.000	47.000	47.000
Sulfate	600.0	597.0	579.0
TDS	1562	1532	1510
Potassium	9.98	9.88	9.96
Bicarbonate	109.00	108.20	107.00

TABLE 4A

CHASE CREEK MONITOR WELL
Five Point Quarterly Average (mg/l)

<u>Element</u>	<u>O,J,A,J,O, 92</u>	<u>Well No. CC-7</u>
Arsenic	.0005	
Barium	.050	
Cadmium	.0025	
Chromium	.025	
Lead	.0005	
Mercury	.0003	
Nitrate (N)	1.72	
Selenium	.005	
Silver	.0050	
Fluoride	.56	
Phenols	.0036	
Copper	.01	
Manganese	.005	
Zinc	.0288	

TABLE 4B

CHASE CREEK MONITOR WELL
Five Point Quarterly Average (mg/l)

<u>Element</u>	<u>O, J, A, J, O, 92</u>	<u>Well No. CC-8</u>
Arsenic	.0019	
Barium	.050	
Cadmium	.0025	
Chromium	.025	
Lead	.0005	
Mercury	.0003	
Nitrate (N)	1.44	
Selenium	.003	
Silver	.0050	
Fluoride	.58	
Phenols	.0018	
Copper	.01	
Manganese	.005	
Zinc	.0071	

TABLE 4C

CHASE CREEK MONITOR WELL
Five Point Quarterly Average (mg/l)

<u>Element</u>	<u>O, J, A, J, O, 92</u>	<u>Well No. CC-14</u>
Arsenic	.0005	
Barium	.050	
Cadmium	.0025	
Chromium	.025	
Lead	.0005	
Mercury	.0003	
Nitrate (N)	1.50	
Selenium	.003	
Silver	.0050	
Fluoride	.77	
Phenols	.0030	
Copper	.02	
Manganese	.008	
Zinc	.0464	

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
Point : A00084 Name : LEAK DETECT
Latitude: 33°3'40 .35" Longitude: 109°19'51 .51"
Township: 04S Range : 29E
Section : 25 Quarter : BDD

PLANT FEED POND

Invnum: 100193
Permit: G-0001-06

Phelps Dodge Morenci, Inc.
Timothy R. Snider, Manager
4521 U.S. Highway 191
Morenci, AZ 85540

Quarterly Reporting - Weekly Monitoring

SPECIFIC CONDUCTANCE				PERMIT LIMIT		PERMIT LIMIT	
				10000.0000		No Limit	
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	

Note: Permit G-0001-06 requires sampling when there are flows of 1 ml/sec.

There were no flows that equaled or exceeded 1 ml/sec.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Quarterly Reporting - Weekly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
Point : A00084 Name : LEAK DETECT

Invnum: 100193
Permit: G-0001-06

[illegible]

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

Samuel R. Smith

DATE 1/19/93

SELF MONITORING REPORT FORM

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00084 Name : LEAK DETECT
 Latitude: 33°3'48 .66" Longitude: 109°19'51 .08"
 Township: 04S Range : 29E
 Section : 25 Quarter : BDD

RAFFINATE POND

Invnum: 100193
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.
 Timothy R. Snider, Manager
 4521 U.S. Highway 191
 Morenci, AZ 85540

Quarterly Reporting - Weekly Monitoring

SPECIFIC CONDUCTANCE				PERMIT LIMIT		PERMIT LIMIT		
SAMPLE DATE		ANALYSIS DATE		STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
*11 / 4 / 92		11 / 4 / 92		+	Field	---	43,400 micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX
/ /		/ /		+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX

Note: Permit G-0001-06 requires sampling when there are flows of 1 ml/sec.

*See page 3 for description of leak detection and repairs.

SELF MONITORING REPORT FORM
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
 Quarterly Reporting - Weekly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK
 Point : A00084 Name : LEAK DETECT

Invnum: 100193
 Permit: G-0001-06

SPECIFIC CONDUCTANCE				PERMIT LIMIT	PERMIT LIMIT
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	CONCENTRATION	LOADING
/ /	/ /		Field	10000.0000	XXXXXXXXXXXXXXXXXX
/ /	/ /		Field	micromhos	XXXXXXXXXXXXXXXXXX
				PERMIT LIMIT	PERMIT LIMIT
				Reserved	No Limit
				CONCENTRATION	LOADING
* 11 / 4 / 92	11 / 4 / 92		Field	1.52	XXXXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
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/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX
/ /	/ /		Field		SU XXXXXXXXXXXXXXXX

*See page 3 for description of leak detection and repairs.

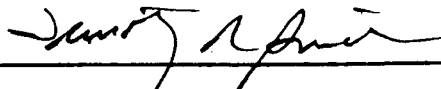
Description of Leak Detection and Repairs

A leak of 3.2 ml/sec. was discovered on November 4, 1992 and electrical conductivity and pH measurements were made. The pond was lowered in a stepwise manner and some pinhole ruptures in the liner were located and repaired on November 5th and 6th.

A leak of less than 1 ml/sec. was discovered on November 11, 1992. Three small cracks in the liner were found and repaired. There have been no leaks since that repair.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT



DATE

1/19/93

GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-7 Sampled: 10-6-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 119.92 (feet below land surface)

Land Elevation at Well (feet above sea level): 3561.61 (M.P.)

Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)

Water Temp. (°C): 22.1 pH (std. units): 6.77 Other: _____

Electrical Conductivity (umhos/cm @ 25°C): 1,970

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: _____

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 22 min Pumping Rate (gpm) 12

Sample Collection Equipment: _____ Well Volumes Removed: 3

_____ Bailer (type): _____

X Pump (type): Submersible Dedicated? Yes

_____ Other (type): _____

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 120 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump

Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
	(All Stored at 4°C)	
General Mineral/Physical	No Additives	1,000 ML Plastic
Total Metals	HNO3 to <2 pH*	500 ML Plastic
Nitrate/Nitrite	H2SO4 to <2 pH*	50 ML Plastic
Phenols	H3PO4 + CuSO4 Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No _____

*All bottles furnished by BC Laboratories Inc. with preservative added.

GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-8 Sampled: 10-6-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 157.81 (feet below land surface)

Land Elevation at Well (feet above sea level): 3621.52 (M.P.)

Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)

Water Temp. (°C): 26.9 pH (std. units): 7.02 Other: _____

Electrical Conductivity (umhos/cm @ 25°C): 1,920

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: _____

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 27 min Pumping Rate (gpm) 10

Sample Collection Equipment: _____ Well Volumes Removed: 3

_____ Bailer (type): _____

X Pump (type): Submersible Dedicated? Yes

_____ Other (type): _____

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump Placed on PVC Pump Column

Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
	(All Stored at 4°C)	
General Mineral/Physical	No Additives	1,000 ML Plastic
Total Metals	HNO3 to <2 pH*	500 ML Plastic
Nitrate/Nitrite	H2SO4 to <2 pH*	50 ML Plastic
Phenols	H3PO4 + CuSO4 Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No _____

*All bottles furnished by BC Laboratories Inc. with preservative added.

GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-14 Sampled: 10-6-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 145.60 (feet below land surface)

Land Elevation at Well (feet above sea level): 3608.39 (M.P.)

Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)

Water Temp. (°C): 23.7 pH (std. units): 6.92 Other: _____

Electrical Conductivity (umhos/cm @ 25°C): 1,850

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: _____

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 22 minutes Pumping Rate (gpm) 10

Sample Collection Equipment: _____ Well Volumes Removed: 3

_____ Bailer (type): _____

X Pump (type): Submersible Dedicated? Yes

_____ Other (type): _____

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump on PV Column

Sample Collection Equipment: Equipment Cleaned with Purge Water from Well

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C) No Additives	1,000 ML Plastic
Total Metals	HNO ₃ to <2 pH*	500 ML Plastic
Nitrate/Nitrite	H ₂ SO ₄ to <2 pH*	50 ML Plastic
Phenols	H ₃ PO ₄ + CuSO ₄ Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No _____

*All bottles furnished by BC Laboratories Inc. with preservative added.

GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM
(for inclusion with the Self-Monitoring Report Form)

Date _____

A. WELL IDENTIFIER (name, location, or number) CC-7 Sampled: 11-2-92

B. FIELD MEASUREMENTS
Depth to Water (prior to purging): 120.53 (feet below land surface)
Land Elevation at Well (feet above sea level): 3561.61 (M.P.)
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)
Water Temp. (°C): 22.1 pH (std. units): 6.84 Other: _____
Electrical Conductivity (umhos/cm @ 25°C): 1930

C. SAMPLING METHODS
Well Purging Performed: Yes: X No: _____
Purging Equipment: Dedicated Pump
Purge Time (hrs.-min.): 23 min Pumping Rate (gpm) 12
Sample Collection Equipment: _____ Well Volumes Removed: 3
 Bailer (type): _____
 X Pump (type): Submersible Dedicated? Yes
 Other (type): _____
If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 120 Feet
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION
Briefly Describe Equipment Decontamination Procedures:
Water Level Measurement Equipment: Wiping with Disposable Towel
Purging Equipment: Dedicated Pump
Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C) No Additives	1,000 ML Plastic
Total Metals	HNO3 to <2 pH*	500 ML Plastic
Nitrate/Nitrite	H2SO4 to <2 pH*	50 ML Plastic
Phenols	H3PO4 + CuSO4 Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)
Filtering Apparatus: Pressure Disposable Filters
Filter Mesh Size: 0.45 Micron
Chain-of-Custody Procedures Followed: Yes X No _____

*All bottles furnished by BC Laboratories Inc. with preservative added.

GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-8 Sampled: 11-2-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 158.79 (feet below land surface)

Land Elevation at Well (feet above sea level): 3621.52 (M.P.)

Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)

Water Temp. (°C): 27.0 pH (std. units): 7.08 Other: _____

Electrical Conductivity (umhos/cm @ 25°C): 1,860

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: _____

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 26 min Pumping Rate (gpm) 10

Sample Collection Equipment: _____ Well Volumes Removed: 3

_____ Bailer (type): _____

X Pump (type): Submersible Dedicated? Yes

_____ Other (type): _____

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump Placed on PVC Pump Column

Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C)	1,000 ML Plastic
Total Metals	No Additives	500 ML Plastic
Nitrate/Nitrite	HNO3 to <2 pH*	50 ML Plastic
Phenols	H2SO4 to <2 pH*	100 ML Glass
	H3PO4 + CuSO4 Solution*	

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No _____

*All bottles furnished by BC Laboratories Inc. with preservative added.

GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-14 Sampled: 11-02-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 146.53 (feet below land surface)
Land Elevation at Well (feet above sea level): 3608.39 (M.P.)
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)
Water Temp. (°C): 23.7 pH (std. units): 7.03 Other: _____
Electrical Conductivity (umhos/cm @ 25°C): 1,830

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: _____
Purging Equipment: Dedicated Pump
Purge Time (hrs.-min.): 23 min Pumping Rate (gpm) 10
Sample Collection Equipment: _____ Well Volumes Removed: 3
 Bailer (type): _____
 X Pump (type): Submersible Dedicated? Yes
 Other (type): _____
If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:
Water Level Measurement Equipment: Wiping with Disposable Towel
Purging Equipment: Dedicated Pump on PV Column
Sample Collection Equipment: Equipment Cleaned with Purge Water from Well

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C)	
Total Metals	No Additives	1,000 ML Plastic
Nitrate/Nitrite	HNO3 to <2 pH*	500 ML Plastic
Phenols	H2SO4 to <2 pH*	50 ML Plastic
	H3PO4 + CuSO4 Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)
Filtering Apparatus: Pressure Disposable Filters
Filter Mesh Size: 0.45 Micron
Chain-of-Custody Procedures Followed: Yes X No _____

*All bottles furnished by BC Laboratories Inc. with preservative added.

GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-7 Sampled: 12-1-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 121.19 (feet below land surface)

Land Elevation at Well (feet above sea level): 3561.61 (M.P.)

Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)

Water Temp. (°C): 22.0 pH (std. units): 6.87 Other: _____

Electrical Conductivity (umhos/cm @ 25°C): 1,970

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: _____

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 27 min Pumping Rate (gpm) 12

Sample Collection Equipment: _____ Well Volumes Removed: 3

_____ Bailer (type): _____

X Pump (type): Submersible Dedicated? Yes

_____ Other (type): _____

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump

Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
	(All Stored at 4°C)	
<u>General Mineral/Physical</u>	<u>No Additives</u>	<u>1,000 ML Plastic</u>
<u>Total Metals</u>	<u>HNO3 to <2 pH*</u>	<u>500 ML Plastic</u>
<u>Nitrate/Nitrite</u>	<u>H2SO4 to <2 pH*</u>	<u>50 ML Plastic</u>
<u>Phenols</u>	<u>H3PO4 + CuSO4 Solution*</u>	<u>100 ML Glass</u>

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No _____

*All bottles furnished by BC Laboratories Inc. with preservative added.

GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-8 Sampled: 12-1-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 159.94 (feet below land surface)

Land Elevation at Well (feet above sea level): 3621.52 (M.P.)

Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)

Water Temp. (°C): 27.1 pH (std. units): 7.11 Other: _____

Electrical Conductivity (umhos/cm @ 25°C): 1,840

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: _____

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 31 min. Pumping Rate (gpm) 10

Sample Collection Equipment: _____ Well Volumes Removed: 3

_____ Bailer (type): _____

X Pump (type): Submersible Dedicated? Yes

_____ Other (type): _____

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 195 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump Placed on PVC Pump Column

Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C) No Additives	1,000 ML Plastic
Total Metals	HNO3 to <2 pH*	500 ML Plastic
Nitrate/Nitrite	H2SO4 to <2 pH*	50 ML Plastic
Phenols	H3PO4 + CuSO4 Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No _____

*All bottles furnished by BC Laboratories Inc. with preservative added.

GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-14 Sampled: 12-1-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): _____ (feet below land surface)

Land Elevation at Well (feet above sea level): 3608.39 (M.P.)

Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)

Water Temp. (°C): 23.5 pH (std. units): 7.08 Other: _____

Electrical Conductivity (umhos/cm @ 25°C): 1,830

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: _____

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 3/ min Pumping Rate (gpm) 10

Sample Collection Equipment: _____ Well Volumes Removed: 3

_____ Bailer (type): _____

X Pump (type): Submersible Dedicated? Yes

_____ Other (type): _____

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 185 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump on PV Column

Sample Collection Equipment: Equipment Cleaned with Purge Water from Well

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
	(All Stored at 4°C)	
General Mineral/Physical	No Additives	1,000 ML Plastic
Total Metals	HNO3 to <2 pH*	500 ML Plastic
Nitrate/Nitrite	H2SO4 to <2 pH*	50 ML Plastic
Phenols	H3PO4 + CuSO4 Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No _____

*All bottles furnished by BC Laboratories Inc. with preservative added.